We claim:

1. A method for optimizing power consumption in at least two communication devices implementing wireless short range radio communication, comprising:

transmitting a low activity request message from one of a polling device and a polled device;

transmitting a low activity response message from the other of the polling device and the polled device responsive to the low activity request message;

processing the low activity request and response messages to derive a set of accepted parameters associated with a period of low activity for the polling device and the polled device; and

entering a low activity mode based on the set of accepted parameters.

2. The method of claim 1, wherein:

one of the low activity messages contains an indication of the number of polling messages to which the polled device will not respond during a low activity mode.

3. The method of claim 1, wherein

one of the low activity messages contains an indication of the number of polling messages that the polling device may selectively refrain from transmitting during a low activity mode.

4. The method of claim 1, wherein:

during processing of the low activity messages, the polling device and the polled device each transmit at least one additional message in deriving the set of accepted parameters.

5. The method of claim 4, wherein :

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at least one message transmitted by the polled device indicates the number of polling messages to which the polled device will not respond during the low activity mode.

6. The method of claim 4, wherein :

at least one message transmitted by the polling device indicates the number of polling messages the polling device may refrain from transmitting during low activity mode.

7. The method of claim 4, wherein the low activity mode is asymmetrical, wherein the polled device and the polling device enter low activity modes of different time durations.

8. The method of claim 4, wherein the low activity mode is symmetrical, the polled device and the polling device enter low activity modes of equal time durations.

9. The method of claim 4, wherein the communication devices implement a modified Bluetooth wireless communication protocol.

10. The method of claim 9, wherein a Bluetooth master device assumes a polling device role.

11. The method of claim 9, wherein a Bluetooth slave device assumes a polled device role.

12. The method of claim 4, wherein the communication devices implement a modified low-end radio wireless communication protocol.

13. An apparatus for optimizing power consumption for a polling device implementing wireless short range radio communication over a data transfer channel, comprising:

a memory for storing instructions;

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a processor that processes said instructions stored to cause the polling device to:

transmit from the polling device a low activity request message to a polled device;

receive a low activity response message from the polled device; and

conditionally enter a low activity mode for a time interval based on parameters from the low activity messages.

14. The apparatus of claim 13, wherein:

the low activity request parameters specify a proposed number of polling messages the polling device may refrain from transmitting.

15. The apparatus of claim 13, wherein:

the low activity response message accepts the low activity parameters.

16. The apparatus of claim 13, wherein:

the low activity response message rejects the low activity parameters in the low activity request message.

17. The apparatus of claim 16, wherein:

the low activity response message includes proposed new low activity parameters.

18. The apparatus of claim 17, further comprising instructions causing the polling device to:

transmit an updated low activity request message based on the proposed new low activity parameters from the polling device; and

receive a new low activity response message accepting the updated low activity request message.

19. The apparatus of claim 13, wherein the polling and polled devices implement a modified Bluetooth communication protocol.

20. The apparatus of claim 13, wherein the polling devices implement a modified low-end radio communication protocol.

21. An apparatus for optimizing power consumption for a polled device implementing wireless short range radio communication over a data transfer channel, comprising:

a memory for storing instructions;

a processor that processes said instructions stored to cause the polled device to:

receive from a polling device a low activity request message including proposed low activity parameters;

transmit a low activity response message to the polling device; and

conditionally enter a low activity mode for a time interval based on low activity parameters included in one of the low activity messages.

22. The apparatus of claim 21, wherein:

the low activity parameters specify a number of polling messages occurring before the polled device accesses the data transfer channel.

23. The apparatus of claim 21, wherein:

the low activity response message accepts the low activity parameters in the low activity request message.

24. The apparatus of claim 21, wherein:

the low activity response message rejects the low activity parameters in the low activity request message.

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25. The apparatus of claim 24, wherein:

the low activity response message includes proposed new low activity

parameters.

26. The apparatus of claim 25, further comprising instructions causing the polled

device to:

receive an updated low activity request message based on the proposed

new low activity parameters from the polling device; and

transmit a new low activity response message accepting the updated low

activity request message.

27. The apparatus of claim 21, wherein the polling and polled devices implement

a modified Bluetooth communication protocol.

28. The apparatus of claim 21, wherein the polling and polled devices implement

a modified Low End Radio communication protocol.

29. A method for optimizing power consumption for a short range wireless

communication device implementing a polling protocol, comprising:

transmitting polling messages to at least one polled device according to a

general polling mode and a request to the at least one polled device to enter a low activity polling

mode;

receiving a response message from the at least one polled device,

containing a response to the low activity mode request;

conditionally entering a low activity polling mode, wherein during the low

activity polling mode either or both of the polling device and the polled device refrain from

accessing the data transfer channel for a time interval in accordance with an accepted set of low

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activity polling mode parameters.

30. The method of claim 29, wherein the time interval is derived from a negotiation between the polling and polled devices.

31. The method of claim 29, wherein:

a periodicity of polling message transmissions in the low activity polling mode is specified in the transmitted low activity mode request.

32. The method of claim 29, wherein the general polling mode further comprises:

the periodicity associated with transmitting the polling messages is defined by a fixed time-interval, wherein said fixed time-interval commences following receipt of said response message.

33. The method of claim 29, wherein the general polling mode further comprises:

the periodicity associated with transmitting the polling messages is defined by a fixed time-interval, wherein said fixed time-interval commences at the end of a previous polling message, if no response message has been detected.

34. The method of claim 29, wherein:

the low activity mode is asymmetrical, whereby the at least one polled device abstains from responding to at least one of the polling messages; and

a number of polling messages the at least one polled device can abstain from responding to is specified in a parameter defined in the low activity mode request.

35. The method of claim 29, wherein:

the low activity mode is asymmetrical, whereby the polling device abstains from transmitting at least one of the polling messages; and

a number of polling messages the polling device can refrain from

transmitting is specified in a parameter defined in the low activity mode request.

36. The method of claim 29, further comprising:

transmitting a message modifying the low activity time-interval after low activity data transfer has occurred.

37. The method of claim 29, further comprising:

conducting carrier sensing multiple access with collision avoidance for determining that there are no transmission conflicts prior to transmitting polling messages.

38. An apparatus for optimizing power consumption for a short range wireless communication device implementing a polling protocol, comprising:

a memory for storing instructions;

a processor that processes said instructions stored to cause the communication device to:

transmit polling messages to at least one polled device according to a general polling mode and a request to the at least one polled device to enter a low activity polling mode;

receive a response message from the at least one polled device, containing a response to the low activity mode request;

enter a low activity polling mode, wherein during the low activity polling mode either or both of the polling device and the polled device refrain from accessing the data transfer channel for a time interval in accordance with an accepted set of low activity polling mode parameters.

39. The apparatus of claim 38, wherein the time interval is derived from a negotiation between the polling and polled devices.

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